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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,452	12/06/2000	Daniel J. Miller	MSI-632US	1212

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EXAMINER

NGUYEN, VAN H

ART UNIT PAPER NUMBER

2194

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732,452

Applicant(s)

MILLER ET AL.

Examiner

VAN H. NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/2/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-26 are presented for examination.
2. The cross reference related to the application cited in the specification must be updated (i.e., update the relevant status, with patent numbers where appropriate, on the amendment pp.2-3).
- 3). Correction is required.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. **Claims 1-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Beaulier et al.** (U.S. 5,162,904) in view of **Littlefield** (U.S. 4,220,823).
5. **As to claim 1**, Beaulier teaches the invention substantially as claimed including a method of generating a development project including at least a matrix switch (abstract, lines 1-4) and one or more adjacent objects (see fig. 3), the method comprising:

 establishing an initial rendering of the development project (col.4, lines 8-13); and

 negotiating buffer size and attribute characteristics between an input/output of the matrix switch and an input/output of adjacent objects (col.4, lines 18-32 and fig. 3), wherein negotiated buffers

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are utilized to communicate media content between the matrix switch and adjacent buffers (col.5, line 47 col.6, line 40).

Beaulier does not explicitly teach a common buffer.

Littlefield teaches a common buffer (col.3, lines 36-45).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Littlefield with Beaulier because Littlefield's teachings would have provided the capability for improving switching capability of the matrix switch implemented in the digital video processing system.

6. As to claim 2, Beaulier teaches modifying input/output associations between objects in the initial rendering of the development project based at least in part on the negotiation (col.4, lines 18-24).

7. As to claim 3, Beaulier teaches the input/output associations are communicative connections through one or more buffers (fig.3 and associated text).

8. As to claim 4, Beaulier teaches a separate buffer for each input and output of each object within the project (fig. 3). Refer to claim 1 above for rejection of a shared buffer.

9. As to claim 5, Beaulier teaches the matrix switch attempts to be an allocator for buffers shared with each of its input(s) and output(s) (col.5, line 47- col.6, line 40).

10. As to claim 6, Beaulier teaches if the matrix switch cannot be an allocator for one or more of its input(s) or output(s), such input(s) and output(s) do not share a common buffer with objects coupled thereto (col.6, lines 42-55).

11. As to claim 7, Beaulier teaches memory copy operations are utilized to communication information to/from input(s) and/or output(s) of the matrix switch for which the switch is not the

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allocator (col.4, lines 45-61).

12. As to claim 8, Beaulier teaches the development project is a media processing project rendered as a filter graph of processing chains (col.10, lines 11-15).

13. As to claim 9, Beaulier teaches a plurality of executable instructions (col.4, lines 9-13).

14. As to claim 10, Beaulier teaches a computing system (col.3, lines 62-66), a storage medium (col.4, lines 22-23) an execution unit (col.4, lines 41-44).

15. As to claim 11, it is directed to a system for performing the method of claim 1, and is similarly rejected under the same rationale.

16. As to claim 12, Beaulier teaches each of the objects comprising the one or more processing chains attempt to negotiate buffer size and attribute characteristics (col.4, lines 18-32 and fig. 3). Refer to claim 1 above for rejection of a shared buffer

17. As to claim 13, Beaulier teaches the objects establish shared buffers between an input of one object and the output of an upstream object upon negotiating mutually acceptable buffer size and attribute characteristics (fig.3 and associated text).

18. As to claim 14, Beaulier teaches the development project is established by a render engine, exposed from an operating system executing on a computing system implementing the development system (fig. 1 and associated text).

19. As to claim 15, Beaulier teaches the render engine facilitates negotiation between objects of the processing chains of buffer size and attribute requirements (col.4, lines 18-32 and fig. 3). Refer to claim 1 above for rejection of a shared buffer.

20. As to claim 16, Beaulier teaches the matrix switch negotiates to be an allocator of buffers between the matrix switch and any object coupled to its input and output to facilitate

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communication between the matrix switch and external objects as well as between its input(s) and output(s) without the need for a memory copy operation (col.5, line 47- col.6, line 40).

21. As to claim 17, Beaulier teaches if the matrix switch is not able to be an allocator of a buffer for an input or an output of the matrix switch, a memory copy operation will be required to communicate with that input or output (col.8, lines 23-34).

22. As to claim 18, Beaulier teaches a memory copy operation is required to communicate information to/from an matrix switch input and/or output for which the matrix switch is not an allocator of a buffer associated with that input and/or output, even if the communication is internal to the matrix switch itself (fig.4 and associated text).

23. As to claim 19, the rejection of claim 1 above is incorporated herein in full.

Additionally,

Beaulier further teaches a dynamically determined number of inputs to receive content from one or more processing chains (col.4, lines 9-13 and col.5, line 48-col.6, line 20); and a dynamically determined number of outputs, selectively coupling one or more of the dynamically determined inputs to one or more of the dynamically determined outputs (col.4, lines 9-13 and col.6, lines 21-40).

24. As to claim 20, Beaulier teaches if the matrix switch cannot negotiate an agreed upon buffer size and attribute characteristics between an input/output and an object coupled to the input/output, communication with the input/output is performed using a memory copy operation (col.5, line 47- col.6, line 40).

25. As to claim 21, Beaulier teaches an input/output coupling the object to the input/output of the matrix switch each have an independent buffer, wherein communication occurs between the

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object and the matrix switch by copying content from one buffer to another buffer (fig.3 and associated text).

26. As to claim 22, Beaulier teaches communication between the input/output of the matrix switch and any other input/output, internal or external to the matrix switch is performed using a memory copy operation (col.5, line 47- col.6, line 40).

27. As to claim 23, Beaulier teaches if an input/output of the matrix switch and an input/output of an object coupled to the input/output of the matrix switch do agree upon buffer size and attribute requirements (fig.3 and associated text). Refer to claim 1 above for rejection of a shared buffer.

28. As to claim 24, Refer to claim 1 above for rejection of a shared buffer.

29. As to claim 25, Beaulier teaches matrix switch identifies buffer size and attribute requirements of all objects coupled to an input/output of the matrix switch, and attempts to negotiate a common buffer size and attribute requirement for all switch input(s) and output(s) (col.4, lines 28-44).

30. As to claim 26, Beaulier teaches a plurality of buffers shared between the dynamically determined inputs and the dynamically determined outputs to buffer processed media content for subsequent use by objects coupled to the matrix switch (fig. 3 and associated text).

Response to Arguments

31. Applicant's arguments filed December 21, 2004 have been fully considered but they are not persuasive.

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32. In the remarks, Applicant argued in substance that (a) Beaulier does not teach negotiating buffer size and attribute characteristics (b) the motivation for combining the references is improper.

33. Examiner respectfully traverses Applicant's remarks.

(i) As to point (a), Beaulier teaches negotiating buffer size and attribute characteristics *(The ME units 20 and 22 and the DSK unit 24 receive the output video signals from the matrix switch 18. Associated with each ME units 20 and 22 and the DSK unit 24 is a variable depth First-In First-Out (FIFO) memory unit 30, 32 and 34 respectively whose depth can be changed and controlled. The video signal to each ME unit 20 and 22 or DSK unit 24 is first supplied to the adjustable FIFO, the output of which is then supplied to the associated ME or DSK unit; col.4, lines 18-32).*

(ii) As to point (b), Examiner notes that the test for the relevance of a cited combination of references is: "whether the teachings of the prior art, taken as a whole, would have made obvious the claimed invention," *In re Gorman*, 933 F.2d at 986, 18 USPQ2d at 1888. Subject matter is unpatentable under section 103 if it would have been obvious ... to a person having ordinary skill in the art. While there must be some teaching, reason, suggestion, or motivation to combine existing elements to produce the claimed device, it is not necessary that the cited references or prior art specifically suggest making the combination: *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988)." Such suggestion or motivation to combine prior art teachings can derive solely from the existence of a teaching, which one of ordinary skill in the art would be presumed to know, and the use of that teaching to solve the same [or] similar problem which it addresses. *In re Wood*, 599 F.2d 1032, 1037, 202 USPQ 171, 174 (CCPA

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1979). "In sum, it is off the mark for litigants to argue, as many do, that an invention cannot be held to have been obvious unless a suggestion to combine prior art teachings is found in a specific reference." *In re Oetiker*, 24 USPQ2d 1443 (CAFC 1992).

34. Accordingly, the combination of Beaulier and Littlefield meets the limitations as broadly claimed by Applicant.

Conclusion

35. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

36. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry or a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM – 6:00PM. The examiner can also be reached on alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Meng-Ai An can be reached on (571) 272-3756.

The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
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